LISTING OF CLAIMS

1. (**Currently Amended**) A monitoring system comprising:

a cluster of multiple application server instances and a central services instance communicatively coupled on a multi-tiered network**, the cluster having** ~~**where**~~ presentation logic and business logic **[[are]]** logically separated from a user application instance executing on a client, the application server instances to serve applications over the network to a plurality of clients, each of the application servers comprising a plurality of server nodes **with at least one server node dedicated for presentation logic and at least one server node dedicated for business logic**, the central services instance to provide messaging and synchronization services between ~~**each application**~~ server ~~**instance**~~ **nodes in the cluster**;

a central database **in the central services instance** storing program code and configuration information for the application server instances;

a plurality of MBean servers assigned to the plurality of server nodes;

a plurality of runtime MBeans associated with specified resources on each of the plurality of server nodes and registered with one of the MBean servers, each of the runtime MBeans collecting and reporting monitoring data for its associated resource; and

cluster integration logic **in the central services instance, the cluster integration logic including a plurality of monitor MBeans arranged in a hierarchical tree structure, each of the monitor MBeans associated with at least one of the runtime MBeans, each of the monitor MBeans to receive resource data from its associated runtime MBean, the cluster integration logic** to compile **the** resource data collected from each of the individual runtime MBeans via the MBean servers **throughout the cluster** and to provide the compiled **resource** data in a predefined organizational structure to a management interface **to provide a unified view of the managed resources in the cluster to an administrator, the predefined organizational structure being a monitor tree representing a hierarchical relationship between each of the resources monitored by each of the MBeans**.

2-3. (**Canceled**)

4. (**Currently Amended**) The system as in ~~**claim 3**~~ **claim 1** further comprising: a management interface to display the resource data in a graphical structure representing at least a portion of the hierarchical tree structure.

5. (**Currently Amended**) The system as in ~~**claim 3**~~ **claim 1** further comprising: a monitor service to generate the monitor MBeans responsive to monitor configuration data.

6. (Original) The system as in claim 5 further comprising: a central database to store the monitor configuration data.

7. (Original) The system as in claim 1 further comprising: a connector associated with each MBean server to communicatively couple each MBean server to the cluster integration logic.

8. (**Currently Amended**) A method comprising:

communicatively coupling a plurality of server nodes via an application server instance that is part of a cluster**, the cluster having a plurality** of application server instances and a central services instance on a multi-tiered network where presentation logic and business logic are logically separated from a user application instance executing on a client, **each application server instance having a plurality of server nodes with at least one server node dedicated for presentation logic and at least one server node dedicated for business logic,** the server nodes to serve applications over the network to a plurality of clients, the central services instance to provide messaging and synchronization services between each application server instance**, wherein the central services instance includes a central database for storing program code and configuration information for the application server instances**;

assigning a dedicated MBean server to each of the plurality of server nodes;

associating a plurality of runtime MBeans with specified resources on each of the plurality of server nodes and registering the MBeans with one of the individual MBean servers, each of the runtime MBeans collecting and reporting monitoring data for its associated resource; and

integrating the resource data collected from each of the individual runtime MBeans and providing the integrated **resource** data to a management interface according to a predefined organizational structure**, wherein integrating the resource data and providing the integrated resource data are performed with** cluster integration logic **in the central services instance, the cluster integration logic including a plurality of monitor MBeans arranged in a hierarchical tree structure, each of the monitor MBeans associated with at least one of the runtime MBeans, each of the monitor MBeans to receive resource data from its associated runtime MBean, and wherein providing the integrated resource data comprises providing a unified view of the managed resources in the cluster to an administrator, the predefined organizational structure being a monitor tree representing a hierarchical relationship between each of the resources monitored by each of the MBeans**.

9-10. (Canceled)

11. (Currently Amended) The method as in ~~**claim 10**~~ **claim 8** further comprising: displaying the resource data in a graphical structure representing at least a portion of the hierarchical tree structure.

12. (Currently Amended) The method as in ~~**claim 10**~~ **claim 8** further comprising: generating the monitor MBeans responsive to monitor configuration data stored within a central database.

13. (Currently Amended) The method as in ~~**claim 10**~~ **claim 8** further comprising: communicatively coupling each MBean server to the cluster integration logic via a connector.

14. (Currently Amended) An article of manufacture comprising a machine-readable storage medium including machine-executable instructions stored thereon which, when executed by a machine, causes the machine to perform the operations of:

communicatively coupling a plurality of server nodes via an application server instance that is part of a cluster**, the cluster having a plurality** of application server instances and a

central services instance on a multi-tiered network where presentation logic and business logic are logically separated from a user application instance executing on a client, **each application server instance having a plurality of server nodes with at least one server node dedicated for presentation logic and at least one server node dedicated for business logic,** the server nodes to serve applications over the network to a plurality of clients, the central services instance to provide messaging and synchronization services between each application server instance**, wherein the central services instance includes a central database for storing program code and configuration information for the application server instances**;

assigning a dedicated MBean server to each of the plurality of server nodes;

associating a plurality of runtime MBeans with specified resources on each of the plurality of server nodes and registering the MBeans with one of the individual MBean servers, each of the runtime MBeans collecting and reporting monitoring data for its associated resource; and

integrating the resource data collected from each of the individual runtime MBeans and providing the integrated **resource** data to a management interface according to a predefined organizational structure**, wherein integrating the resource data and providing the integrated resource data are performed with** cluster integration logic **in the central services instance, the cluster integration logic including a plurality of monitor MBeans arranged in a hierarchical tree structure, each of the monitor MBeans associated with at least one of the runtime MBeans, each of the monitor MBeans to receive resource data from its associated runtime MBean, and wherein providing the integrated resource data comprises providing a unified view of the managed resources in the cluster to an administrator, the predefined organizational structure being a monitor tree representing a hierarchical relationship between each of the resources monitored by each of the MBeans**.

15-16. (Canceled)

17. (Currently Amended) The article of manufacture as in ~~**claim 16**~~ **claim 14** comprising additional program code to cause said machine to perform the operations of:

displaying the resource data in a graphical structure representing at least a portion of the hierarchical tree structure.

18. (Original) The article of manufacture as in claim 14 further comprising: generating the monitor MBeans responsive to monitor configuration data stored within a central database.

19. (Original) The article of manufacture as in claim 14 further comprising: communicatively coupling each MBean server to the cluster integration logic via a connector.

20. (Canceled)

21. (**New**) The system as in claim 1 wherein the cluster integration logic provides the compiled resource data to the administrator via a swing-based graphical user interface (GUI) to enable remote administration of the cluster.

22. (**New**) The method as in claim 8 wherein the cluster integration logic provides the compiled resource data to the administrator via a swing-based graphical user interface (GUI) to enable remote administration of the cluster.

23. (**New**) The article of manufacture as in claim 14 wherein the cluster integration logic provides the compiled resource data to the administrator via a swing-based graphical user interface (GUI) to enable remote administration of the cluster.